



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/780,175

02/17/2004

Jeffrey A. Schultz

1981/660

9858

757

7590

12/08/2006

BRINKS HOFER GILSON & LIONE

P.O. BOX 10395

CHICAGO, IL 60610

EXAMINER

RIVELL, JOHN A

ART UNIT

PAPER NUMBER

3753

DATE MAILED: 12/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/780,175

Applicant(s)

SCHULTZ, JEFFREY A.

Examiner

John Rivell

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/27/06 (amendment).
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>09272006</u> . | 6) <input type="checkbox"/> Other: _____ |

Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

Claims 1-22 remain pending.

The disclosure is objected to because of the following informalities: In the specification, the description of the operation of the embodiment of figure 3, at paragraph [0030] appears to be in error. Given that the valve device of fig. 3 is presumed to be inserted into a tire rim hole in the same manner that the embodiment of fig. 1 is inserted into the tire rim hole, the flange element 130 of fig. 3 would thus be located within the pressurized area inside the tire and in abutment with the "outer wall" of the rim. As such fluid pressure would appear to be relieved in a manner reverse to that specified in paragraph [0030]. That is, pressurized fluid, present within channel 112 will, upon reaching a value greater than the force of spring 126, would move valve head 122 from the valve seat to open a passage from within the tire to atmosphere through holes 105. Additionally, under the belief that paragraph [0030] is in error, paragraph [0033] describing an embodiment in which the position of the valve is "reversed" and functions in the manner that is believed appropriate for the embodiment of fig. 3, is not understood.

Applicants comments in this regard do not clear up this objection. For example, the statement:

"Referring to Figure 3, in one embodiment the valve will be inserted so that the cap 130 and corresponding pathway, is exposed to the atmosphere. In contrast, holes 105 will not be exposed to the atmosphere. If they were exposed, pressurized air would not enter the chamber 120. Thus, when the pressure relief valve is "actuated," excess pressure will in fact exit out the pathway 112."

is confusing in several ways.

Firstly, the "cap" is element 103 not element 130. If element 130 were exposed to the atmosphere then the device will not work. The opposite end being the end exposed to internal tire pressure would then have the "cap" at 103 located within the tire pressure area. Fluid pressure within the tire, exposed to the spring side of the valve head 124 will always overpower fluid pressure acting only on the area at 120 thus tending to maintain the valve closed.

When "cap" 103 is exposed to atmosphere then the device will work as a pressure relief valve as desired. However, the holes 105 would not then be exposed to tire pressure as disclosed in paragraph [0030].

Also note paragraph [0029] which discusses fluid pressure exiting "the holes 105 (to) allow excess pressure to exit from the chamber 120 when the pressure in a tire rises to the predetermined pressure."

The embodiment in which element 130 is exposed to tire pressure, thus presenting tire pressure in passage 112 to act on valve head 124 against spring 126. and "cap" 103 is exposed to atmosphere to allow venting through holes 105 and to permit ready access for adjustment of the closing bias is understood to work presuming that the speed of the vehicle is not such that precludes operation against the spring 126. (No mention is made of the change in closure bias based on tire speed and the centrifugal force associated therewith tending to force the valve head toward the seat in both embodiments. Thus, at least for the embodiment disclosed in figure 1, as the tire speed increases, the centrifugal force generated thereby acting outwardly on the valve

head at seal 22 increases thus forcing the seal 22 onto the seat with a value in addition to the force of the spring thus increasing the relief valve beyond that set by the spring.) However, this is not what is described in paragraph [0030]. Under this embodiment, the "reverse" of paragraph [0033] will not work as implied above. Or, as disclosed at paragraph [0030] the device does not work and the "reverse" acts as noted above to relieve fluid pressure.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7, 9-19 and 22 are rejected under 35 U.S.C. §102 (b) as being anticipated by Novak.

The patent to Novak discloses a "pressure relief valve (generally at 10), comprising: a valve insert (at cylinder 40) having an opening (e.g. chamber 42) at a first end and a pathway (46) extending towards the opening from a second end of the valve insert (40); an adjustment member (70, i.e. in that embodiment in which spring adjusting washer 70 is threadably engaged to the insert 40 as disclosed at column 3, lines 18-21) received within in the opening (42) of the valve insert (40), the valve insert (40) and the adjustment member (70) defining a chamber (chamber 42 below the washer 70) adjacent the pathway (46), the adjustment member (70 inherently) including a throughway (as clearly implied by the arrows indicating fluid flow in figure 3); a continuous bearing element (element 64 retained by poppet 62) within the chamber (42

Art Unit: 3753

below washer 70) and adjacent the pathway (46), a width of the bearing element (64, 62) being larger than a width of the pathway (46), a spring (72) within the chamber (42 below washer 70), the spring (72) under compression and in line with the bearing element (64, 62); and a cushioning member (at 20) surrounding the valve insert (40), the cushioning member (20) allowing the flow of pressurized fluid (at 52); wherein the spring (72) exerts a force on the bearing element (64, 62) such that the bearing element (64, 62) is biased against the pathway (46) and forms a seal between the chamber (42) and the pathway (46) and wherein there is no fluid communication between the pathway (46) and the bearing element (64, 62)" as recited in claim 1.

Regarding claim 2, in Novak, "the bearing element (64, 62) includes at least in part a sealing member (washer 64), the sealing member (64) adjacent to the pathway (46)" as recited.

Regarding claim 3, in Novak, "the bearing element (62, 62) further comprises a pin (read on the upstanding tubular portion of poppet member 62) adjacent to the sealing member (64)" as recited.

Regarding claim 4, in Novak, "the pin (as noted above) is adjacent the spring (72)" as recited.

Regarding claim 5, in Novak, "the pin further includes a receptacle that receives the sealing member (64)" as recited.

Regarding claim 6, in Novak. "the valve insert (40) is made of brass" (column 3, lines 12-13) as recited.

Regarding claim 7, in Novak and the embodiment disclosed at column 4, lines 18-21, "the valve insert (40) includes interior threads and the adjustment member (70) includes exterior threads that engage with the interior threads of the valve insert (40)" as recited.

Regarding claim 9, in Novak, "the cushioning member (20) is made of rubber" as recited.

Regarding claim 10, in Novak, "the cushioning member further comprises a flange (read at 28) and a detent (read at 26) for engagement with a tire rim (12)" as recited.

Regarding claim 11, in Novak, "the cushioning member (20) further comprises an opening (at 53) in fluid communication with the pathway (46)" as recited.

Regarding claim 12, in Novak, "a width of the bearing element (64) is smaller than a width of the chamber (42 below washer 70)" as recited.

Regarding claim 13, the patent to Novak discloses a "pressurized tire (inherently attached to tire rim 12), comprising: a tire rim (12); a pressure relief valve (generally read at 10) attached with and in fluid communication with the tire rim (12), the pressure relief valve including: a valve insert (40) having a first (upper) end, at least one opening (defining space 42), and a pathway (46) extending towards the opening from a second (lower) end of the valve insert (40); an adjustment member (70) received within a cavity (42) of the valve insert (40), the valve insert (40) and the adjustment member (70) defining a chamber (42 below washer 70) adjacent the pathway (46), the adjustment member (70) including a (inherent, as defined by the flow arrows of figure 3)

Art Unit: 3753

throughway; a continuous bearing element (at 64, 62) within the chamber (42) and adjacent the pathway (46), the bearing element (64, 62) being larger than a width of the pathway (46), a spring (72) within the chamber (42), the spring (72) under compression and in line with the bearing element (64, 62); and a cushioning member (20) surrounding the valve insert (40), the cushioning member (20) allowing the flow of pressurized fluid (via inlet port 53); wherein the spring (72) exerts a force on the bearing element (64, 62) such that the bearing element (64, 62) is biased against the pathway (46) and forms a seal between the chamber (42) and the pathway (46) and wherein there is no fluid communication between the pathway (46) and the bearing element (64, 62)" as recited.

Regarding claim 14, in Novak, "the cushioning member (20) further comprises a flange (28) that contacts an outer wall of the tire rim (12)" as recited.

Regarding claim 15, in Novak, "the cushioning member (20) further comprises a detent (26) that contacts an inner wall of the tire rim (12)" as recited.

Regarding claim 16, in Novak, "the cushioning member (20) further comprises a flange (26) that contacts an inner wall of the tire rim (12)" as recited.

Regarding claim 17, in Novak, "the cushioning member (20) further comprises a detent (28) that contacts an outer wall of the tire rim (12)" as recited.

Regarding claim 18, in Novak, and the embodiment disclosed at column 4, lines 18-21, "the valve insert (40) includes interior threads and the adjustment member (70) includes exterior threads that engage with the interior threads of the valve insert (40)" as recited.

Regarding claim 22, in making, using and/or assembling the device of Novak, one necessarily performs a "method for inserting a pressure relief valve (generally at 10) into a tire (rim 12) comprising: inserting a pressure relief valve (at body 40) having a cushioning member (20) into an opening (14) of a tire rim (12); passing a detent (26) of the cushioning member (20) past one of an inner or outer wall of the tire rim (12); and contacting a flange (28) of the cushioning member (20) with the other of the inner or outer wall of the tire rim (12)" as recited.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Novak.

Novak discloses the claimed invention except for "four openings to allow the flow of fluid into the chamber".

It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ four openings in Novak in place of single opening 46 of Novak, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art unless a new and unexpected result is produced. *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960). Here one need only duplicate the existing "opening" as many times as desired.

Claims 8 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Novak in view of Smith.

The patent to Novak discloses all the claimed features with the exception of having "stainless steel" as the material of spring 72.

The patent to Smith discloses that it is known in the art to employ "stainless steel" as the material for relief valve spring 72, which functions to bias a tire overpressure indicator 71, for the purpose of accommodating the environment in which the spring element is exposed to thus ensuring a long wear life.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Novak "stainless steel" as the material of bias spring 72 for the purpose of accommodating the environment in which the spring element is exposed to thus ensuring a long wear life as recognized by Smith.

Regarding applicants remarks as they may apply to the above, the "bearing element" at seal 64 and valve head element 62 of Novak does not include a fluid passage extending through either one of these elements. While fluid does pass around these elements when the valve is open, as is noted to be the case in applicants device by applicant in the remarks, the "bearing element" of Novak is solid such that there is "no fluid communication between the pathway (at inlet 46) and the bearing element (64, 62)" equal to the fluid communication passage 36 of the previously relied on reference Fuller.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

Art Unit: 3753

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Rivell whose telephone number is (571) 272-4918. The examiner can normally be reached on Mon.-Thur. from 6:30am-5:00pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Keasel can be reached on (571) 272-4929. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


John Rivell
Primary Examiner
Art Unit 3753

j.r.